Voting Technology Costs and Considerations

Most of the analyses of the costs of evoting systems have looked at the disparity in initial capital costs as compared to other types of voting systems, such as optical scan voting systems. Those initial capital costs are at least a factor of 2 or 3 higher than for precinct-count optical systems, depending on the average number of voting stations per polling place in a given jurisdiction.

Proponents of evoting systems argue that those initial higher capital costs will be recovered over time via reduced costs for printing paper ballots. owever, the payback times (for paperless e-voting systems) are estimated at 15 to 20 years, which may well exceed the operational lifetime of such systems.

In states, such as California, which will require all e-voting systems to provide an voter-verified paper audit trail, the operating costs will be even higher, and the payback times even longer.

In addition, there are significant hidden costs associated with e-voting machines. For example, the process of conducting logic and accuracy tests (typically required before each election) are significantly more labor intensive than corresponding tests on optical ballot scanners.

The former require test votes to be entered by hand, while the latter can be tested by simply counting a standard test deck of optical scan ballots. In addition, an e-voting solution requires a significantly higher number of total machines, since each polling place will require 4 to 8 machines, as opposed to a single optical scanner per polling place. he more machines you have, the higher the costs for storage, hardware maintenance contracts, software maintenance contracts, and replacement of parts (e.g., batteries). Once these costs are factored in, along with the costs of consumables for the voter-verified paper audit trail, the operating costs may exceed those of a precinct-count optical scan solution, even when factoring in the costs of the pre-printed optical scan ballots.

E-voting systems provide not only a less verifiable voting system than do optical scan paper ballot systems, they are also significantly less cost-effective. The accessibility features that evoting systems provide (e.g., enabling blind voters to vote in secret and with independence) can be provided just as well by ballot marking devices, which enable voters with disabilities to mark and verify standard optical scan ballots. Thus, while adding voter-verified paper audit trail printers makes an evoting solution less bad than it otherwise would be, it really amounts to putting a band aid on what is a fundamentally flawed and expensive design.

Here are some more resources related to voting technology costs:

Officials Will Meet to Discuss Pros, Cons of 2 Voting Machines
by Tom Grace, The Daily Star
June 8, 2005

Miami-Dade Elections: Paperless Voting Costs Soar
by Tere Figueras Negrete, The Miami Herald
May 26, 2005

2005 IOWA HAVA Voting Systems Master Contract Pricing List

Iowa
May 16, 2005

Elections Chief Pares Massive Budget Request
by George Bennett, Palm Beach Post
May 14, 2005

Optical Vote Scan Machines Cheaper, More Accurate, Group Says
by Jarrett Carroll, Legislative Gazette
April 20, 2005

County Approves Purchase of New Voting Machines
by Nick Hytrek, Sioux City (Iowa) Journal
April 20, 2005

Analysis of Acquisition Costs of DRE and Precinct Based Optical Scan Voting Equipment for New York State
New Yorkers for Verified Voting
April 13, 2005
Several analyses have been done comparing capital costs of DRE and optical scan systems, and two of the most thorough were conducted in two states that currently use level machines, New York and Connecticut. Since those lever machines need to be phased out, these studies looked at the costs of replacing them with either e-voting machines or precinct-count optical scanners. Note that both the NY and CT analyses are for states that currently have lever machines and which need to replace them with more modern technologies.

Dade (FL) Studies Switch to Paper Ballots
by Noaki Schwartz, Miami Herald
April 12, 2005

DRE Voting Machines Costly to Use
by Rosemarie F. Myerson and Charles Edwards
April 4, 2005

Options for Replacing Connecticut's Voting Machines: A Cost Analysis
by Michael J. Fischer, TrueVoteCT
March 12, 2005

Comparison of Operating Costs: Punch Card and Electronic Voting Machines in Sarasota County, Florida and Optical Scanners in Manatee County, Florida
by Rosemarie Myerson, VotersUnite.org
February 8, 2005
This study was recently conducted in Florida, comparing the voting systems operating costs for two counties over the last 3 years, using published numbers from those counties budgets. One of the counties used a precinct count optical scan scan system while the other used a paperless evoting system. Even without the added costs of that would be associated with a requirement for a voter-verified paper audit trail, the actual operating costs for the county with the paperless evoting system were significantly higher than those for the county using a precinct-count optical scan system.

Caltech-MIT Voting Project Report (2001)
Voting Technology Project